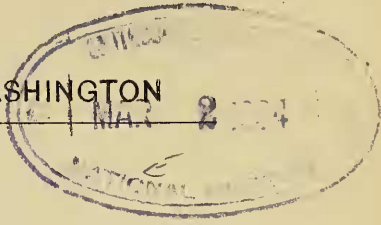


PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON



A NEW SPECIES OF BRAZILIAN TERMITE, FEATUR-
ING AN INTERMEDIATE SOLDIER-WORKER
INDIVIDUAL.

BY THOS. E. SNYDER,
Bureau of Entomology, U. S. Department of Agriculture.

“Intermediate” forms among the castes of termites are rather rare. It is true that intermediate forms among the colonizing reproductive adults, ranging from apterous to macropterous forms, are not uncommon; but when we consider the sterile soldier and worker castes, intermediates are very rare.

In colonies of *Kalotermes (K.) occidentis* Walker, of Arizona and western Mexico, all soldiers have wing pads or traces of wings, whereas among most other primitive termites wing pads are only occasionally found on soldiers. These soldiers are not fertile, but are merely reversions to the ancestral winged termite.

Where fertile soldier-like forms do occur, as in species of *Termopsis* of the Pacific Coast, the form of the soldier is not normal and they may be considered as intermediates between the ancestral winged sexual adult and the normal sterile soldier. None of the higher more specialized termites have soldiers with wing pads or fertile soldier-like forms and no fertile workers of any termite have as yet been discovered.

Among the termites classified between the primitive and the higher termites, such as those in our common genus *Reticulitermes* of North America and the north temperate regions of the world, a rare abnormality has been found. In the species *tibialis* Banks, of the western States, a male half worker, half soldier form was found over 15 years ago near Missoula, Mont. The head has the characteristic color of the soldier caste and is slightly longer than the head of the worker. The mandibles and labrum are typically worker-like, but are extended as in the soldier. This

form may merely be a worker of abnormal development or it may be an intermediate between the worker and soldier castes.

The soldier develops from a worker-like form to the soldier-like form during a quiescent stage, thereby in its ontogeny expressing the phylogeny of this caste, according to Emerson's theory. If something happens during this transformation, abnormalities or intermediates may result.

Recently a more definite intermediate soldier-worker form was found in a vial among a small collection of termites sent to me for identification. A description of this termite and of the intermediate follows.

Nasutitermes (N.) *myersi*, n. sp.

Soldier.—Head castaneous brown, large, neither round nor oval; in profile, nearly a straight line slightly concave in middle and convex at base of nasus; with dense, fairly long hairs and longer bristles.

Nasus short and conical.

Mandibles vestigial, but plainly visible.

Antennae with 13 segments; third segment nearly as long as second and fourth together; fourth segment longer than second but shorter than fifth.

Pronotum lighter colored than head, yellow-brown; with dense, fairly long hairs and longer bristles; markedly roundedly emarginate in middle.

Abdomen yellow-brown; tergites with dense, fairly long hairs and a row of longer bristles at the base of each tergite.

An intermediate soldier-worker form has the color of the soldier, but has a shorter nasus than the soldier, and worker-like mandibles. Other differences are that this intermediate, like the worker, has 14 segments to the antennae, whereas the soldier has only 13. The third segment is merely longer than the second or third, whereas in the soldier the third segment is nearly as long as the second and third segments together. In general, this form is more worker-like than soldier-like. (See figs. 1 and 2.) In the measurements in the following table the minimum measurements are more normal than the maximum for the worker and the maximum more normal for the soldier.

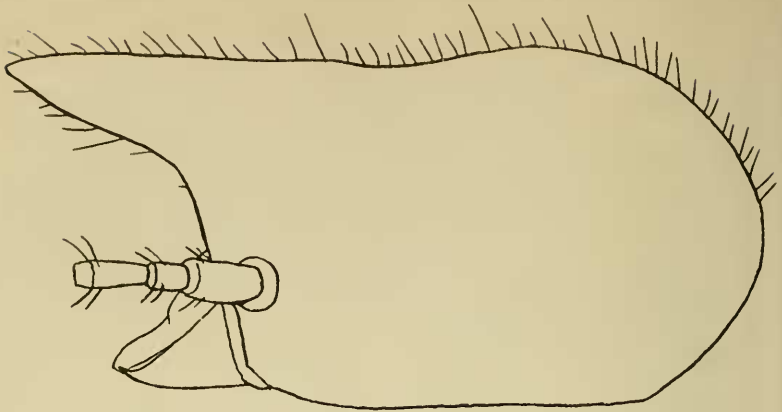
Measurements of the soldier in comparison with the worker and intermediate form:

<i>Soldier</i>	<i>Worker</i>	<i>Intermediate</i>
mm.	mm.	mm.
Total length..... 5 - 6	5.3 - 6	5.1
Length of head with nasus..... 1.8 - 2.2		1.4
Length of head without nasus (to base of mandibles)..... 1.1 - 1.4	1.1 - 1.4	1.1
Length of head without nasus (to tip of labrum)..... 1.3 - 1.65	1.8 - 2.2	1.8
Length of nasus..... 0.65- 0.75		0.3
Length of pronotum..... 0.3 - 0.4	0.4	0.4
Length of hind tibia..... 1.5 - 1.8	1.6 - 1.7	1.6
Width of head..... 1.2 - 1.5	1.4 - 1.5	1.4
Width of pronotum..... 0.7 - 0.9	0.9 - 1	0.9

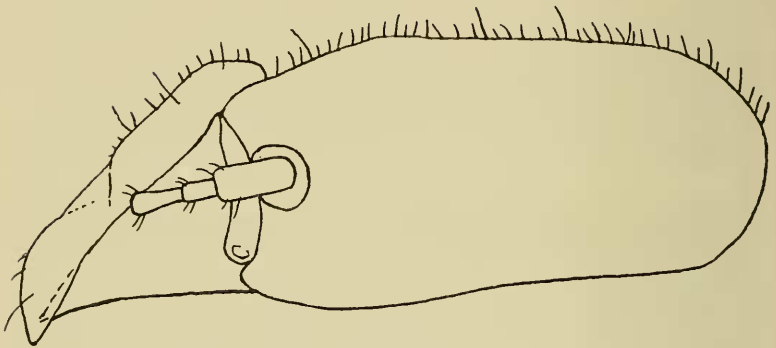
Comparison with other species.—The large, densely hairy head, color, and markedly emarginate pronotum distinguish this species from *macrocephalus* Silv., its closest relative.

Type locality.—Colinga-Uraruera, Savannas, Amazonas, Brazil. Described from six soldiers collected, with eight workers and one intermediate soldier-worker form, at the type locality by Dr. J. G. Myers in 1932, No. 3407. This termite is named in honor of the collector, entomologist of the Imperial Institute of Entomology.

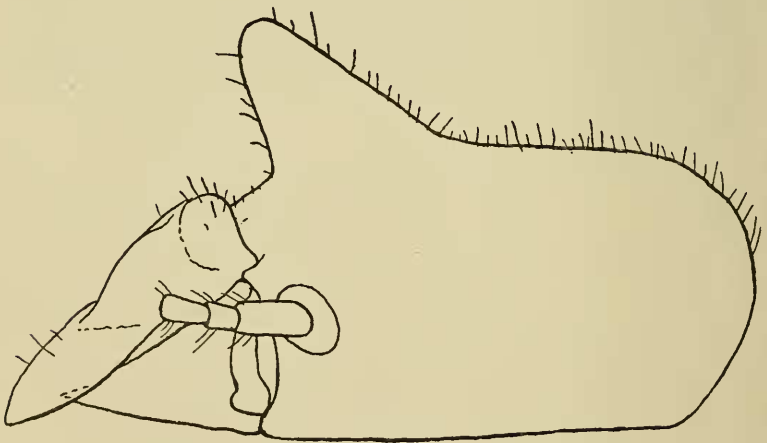
Cotypes, soldiers.—Cat. no. 49892, U. S. National Museum, in British Museum, and in the collection of Dr. A. E. Emerson of the University of Chicago.



a.



b.



c.

FIG. 1.—*Nasutitermes* (*N.*) *myersi* Snyder: a Soldier, lateral view of head; b, worker, lateral view of head; c, intermediate soldier-worker, lateral view of head. All enlarged 54 times. Drawn by H. B. Bradford.



a.



b.

FIG. 2.—*Nasutitermes* (*N.*) *myersi* Sny. Dorsal view of mandibles (a) of worker and soldier-worker and (b) soldier. Enlarged 54x.